

HAYNES DISCOVERED VALUE OF TUNGSTEN

Inventor of "Horseless Carriage" Is
Also Noted Chemist.

It was not by accident that Elwood Haynes, president of the Haynes Automobile Company, Kokomo, Ind., invented America's first automobile in 1895. Years of study and experimentation preceded the first actual run of the car in Kokomo, Ind., July 4, 1894. Most of Mr. Haynes' previous study and training was such that he understood, more than most men of his day, the possibilities and limitations of power, transmission and development.

The inventor was born in Portland, Ind., October 14, 1857. When he was 14 a chemistry book used by his sister in college provided the incentive for home experiments. The following year he built his own apparatus for making oxygen and almost succeeded in producing tungsten steel. He was unable to maintain a high enough uniform temperature to accomplish the latter result at that time.

After studying at the Worcester Polytechnic Institute for three years he graduated in 1881. His graduation thesis was on "The Effect of Tungsten on Steel." He discovered tungsten steel the same year.

For a time after his graduation Mr. Haynes served as principal of the Portland High School. A post-graduate course in chemistry and biology at Johns Hopkins University followed. It was in 1891 while he was field superintendent of a natural gas company with offices in Greentown, Ind., that Mr. Haynes conceived the idea of building a horseless carriage.

Mr. Haynes began the actual construction of the car in Kokomo in 1893. When completed it weighed 320 pounds. The new horseless carriage started and was run about one and one-half miles into the country carrying Mr. Haynes and a passenger. The repairs of about five and one-half miles was made without a stop at what was regarded as exceptional speed—six and one-half miles an hour. It was not fast but drivers who chanced to see it from behind were startled by the new "contraption" would run them down.

After the car had been exhibited in most of the important cities of the country Mr. Haynes, in 1899, presented it to the Smithsonian Institution, where it stands as a monument to the great step in transportation it provided.

Eight Rules for Saving Gasoline

No matter what the car, or what its size, the driver can save gasoline if he will follow the simple suggestions made by a Cadillac engineer. Most of them are a matter of handling the car. Here they are—eight of them.

Carburetor adjustment is of prime importance. A mixture that is too rich or too lean will cause more gasoline to be used in performing a given amount of labor than a correct mixture. But don't attempt to adjust your carburetor unless you know how.

Most cars have what may be termed an economical speed. It ranges from twelve to twenty miles per hour. When you get above that speed the amount of gas used per mile increases.

Anticipate slowing up and disengage the clutch far enough ahead of the place you want to stop so that very little use of the brake will be necessary. Whenever you allow the engine to run with the car standing you are using up gas that doesn't make any showing on your odometer.

See that the brakes are properly adjusted. Tight brakes cause friction and friction takes power, and hence gasoline, to overcome.

Good lubricating oil is also essential to gasoline economy.

Finally, tires should be properly inflated. Soft tires drag and require more power to propel the car than tires containing correct air pressure.



The new and spacious home of the Neumeier Motor Company, local distributors of the Mitchell car. But, then, pictures are just pictures. You must pay a visit to these splendidly equipped showrooms to appreciate the place and hear all about the car it houses.

Motor Boat Saves the Day When Truck Train Stalls

Makes 27-Mile Trip on Lake Erie With 450-Pound Tire in Less Than Sixty Minutes.

Coal's right of way, the rush of food and munitions to our armies in France and the slowing down of transportation because of snowdrifts, has made the word "Rush" of little value in freight or express shipments this winter.

Thousands of motor trucks are now doing their bit to relieve the situation and assist the railroads in their task by carrying huge consignments of goods across country. Fleet after plows through all sorts of impediments and gets its burden to its destination.

Trucks Tied Up.

But sometimes accidents happen and heroic methods are necessary. Such a case occurred recently at Lorain, Ohio, and only high resourcefulness and prompt action on the part of one man prevented expensive and disastrous delay.

Laden with material for a munitions plant in Indiana, a fleet of trucks owned by the Knutsen Motor Trucking Company was rolling through rough roads west of Lorain when one of the leading trucks shot off the road in a drift and its right fleet plows through all sorts of impediments and gets its burden to its destination.

The driver got into touch with Coleman and Burnett, local tire dealers, and Mr. Coleman had no tire in stock to fit this truck. He immediately telephoned to Manager J. E. Mayl, of the Cleveland branch of the Firestone Tire and Rubber Company, asking that a 42x12 Giant truck tire be got to him within two hours. Mayl soon found that freight, express, or motor truck methods could not get the tire to its destination in time.

Then he thought of a recent trip he had enjoyed as the guest of his friend Commodore Robert E. Babcock, of the Cleveland Ice Yacht Club, on the latter's speedy "Blue Ribbon." He called up the commodore and put the proposition squarely up to him.

"If you'll get that tire to our dock in 10 minutes I'll shoot her through to Lorain for you in much less than an hour," replied the commodore. The distance by rail between Cleveland and Lorain is twenty-seven miles and the scheduled running time of the train is 50 minutes. The route over water is several miles longer.

Sixteen minutes after Mayl and the commodore had talked, the "Blue Ribbon," conveyed by the "Red Head," shot out of her berth in Cleveland, with the 40-pound tire lashed over her windshield runner. Dashing out of the harbor onto the smooth ice of Lake Erie, she shot along at a mile-a-minute clip, the breeze at times heeling her over until the tire was several feet above the ice.

Records Broken.

Speeding into Lorain Harbor, she slid up to the dock and all hands helped swing the tire into the waiting service car. It was rushed to the service station where it was pressed onto a new wheel by the 150-ton hydraulic press and then shot out to the disabled truck.

All records between Cleveland and Lorain had been smashed and a minimum of delay had been caused, through the resourcefulness of the Firestone manager, who would not be "stumped" by the apparent lack of transportation facilities.

And the delay had been caused, through the resourcefulness of the Firestone manager, who would not be "stumped" by the apparent lack of transportation facilities.

finding it leads to nowhere, return to the main road—the road that the Olympian invariably continues to travel—the road that tends to give the purchaser the best in the market at that price.

finding it leads to nowhere, return to the main road—the road that the Olympian invariably continues to travel—the road that tends to give the purchaser the best in the market at that price.

finding it leads to nowhere, return to the main road—the road that the Olympian invariably continues to travel—the road that tends to give the purchaser the best in the market at that price.

finding it leads to nowhere, return to the main road—the road that the Olympian invariably continues to travel—the road that tends to give the purchaser the best in the market at that price.

finding it leads to nowhere, return to the main road—the road that the Olympian invariably continues to travel—the road that tends to give the purchaser the best in the market at that price.

finding it leads to nowhere, return to the main road—the road that the Olympian invariably continues to travel—the road that tends to give the purchaser the best in the market at that price.

finding it leads to nowhere, return to the main road—the road that the Olympian invariably continues to travel—the road that tends to give the purchaser the best in the market at that price.

finding it leads to nowhere, return to the main road—the road that the Olympian invariably continues to travel—the road that tends to give the purchaser the best in the market at that price.

finding it leads to nowhere, return to the main road—the road that the Olympian invariably continues to travel—the road that tends to give the purchaser the best in the market at that price.

finding it leads to nowhere, return to the main road—the road that the Olympian invariably continues to travel—the road that tends to give the purchaser the best in the market at that price.

finding it leads to nowhere, return to the main road—the road that the Olympian invariably continues to travel—the road that tends to give the purchaser the best in the market at that price.

finding it leads to nowhere, return to the main road—the road that the Olympian invariably continues to travel—the road that tends to give the purchaser the best in the market at that price.

finding it leads to nowhere, return to the main road—the road that the Olympian invariably continues to travel—the road that tends to give the purchaser the best in the market at that price.

finding it leads to nowhere, return to the main road—the road that the Olympian invariably continues to travel—the road that tends to give the purchaser the best in the market at that price.

finding it leads to nowhere, return to the main road—the road that the Olympian invariably continues to travel—the road that tends to give the purchaser the best in the market at that price.

finding it leads to nowhere, return to the main road—the road that the Olympian invariably continues to travel—the road that tends to give the purchaser the best in the market at that price.

finding it leads to nowhere, return to the main road—the road that the Olympian invariably continues to travel—the road that tends to give the purchaser the best in the market at that price.

finding it leads to nowhere, return to the main road—the road that the Olympian invariably continues to travel—the road that tends to give the purchaser the best in the market at that price.

finding it leads to nowhere, return to the main road—the road that the Olympian invariably continues to travel—the road that tends to give the purchaser the best in the market at that price.

finding it leads to nowhere, return to the main road—the road that the Olympian invariably continues to travel—the road that tends to give the purchaser the best in the market at that price.

Auto Heraldings

With spring but two months away, the wise dealer is now busy laying his plans for the coming season. There is more money in this country at the present time than ever before, despite or because of the war; the Russian situation looks brighter than hitherto, and that there will be a greater demand for cars than it will be possible to supply is an accepted fact. The value of the motor-truck has been demonstrated under the most trying and rigorous of tests.

Most manufacturers, whose plants were not given over to government work, foresaw this condition and have done their utmost to meet the demands that will be placed upon them. The cars are being built and are being shipped as fast as the congestion of roads will permit.

The dealer with foresight is driving as many cars as possible over the roads from the factories to his showrooms. From all present indications that is the best, and possibly the only way, in which anyone will be able to secure any car of the 1918 model. Very few, at most, will find their way to the showrooms in the East in any other manner.

Time was when, at this time of the year, the local dealers were busy checking up their prospect lists and making notes feverishly of those who intended purchasing a car. That day, for the present at least, is gone.

With the demand greater than the supply, the dealers this spring will be kept busy trying to figure out how many cars they will be able to secure this season and how they will get them.

Not as propaganda—but as good, sound advice, we offer the following: **BUY YOUR CAR NOW!**

Further, we are warned that cars will increase in price, even far in advance of the present increase, which has been a general one. One need not cast about much for a reason if a few moments is spent in considering the following:

Frame steel, which cost \$1.35 per cwt. in 1916, now costs \$5.25. Sheet steel, which cost \$2.75 per cwt. a year ago, now sells for \$8.15.

Aluminum castings, which were bought by manufacturers at 28 cents a pound a year ago, now cost 50 cents a pound.

Cast iron, for cylinders and other engine parts, used to be bought in 1917 for \$13.75 a ton. It now costs \$43 a ton.

If you NEED a car; if you intend to BUY a car; if you WANT a car: **BUY IT NOW!**

To what trouble people will go to take the pleasure out of life! Just as we had all satisfied ourselves with the conclusion that they to the F. and F. administrations belonged the sole distinction that they alone may be able to discover in the "less" days, there comes before us the notice that after an exhaustive study a French scientist has unearthed the fact that more than 600 years ago man endeavored to build a "horseless" carriage!

The scarcity of gasoline in Germany and Austria has forced the military authorities to give increasing attention to the possibilities of alcohol as a motor-vehicle fuel. Turkey, which offers exceptional opportunities in this respect will, it is said, be turned into a granary, and large-scale production of industrial alcohol there is planned. A scheme for the realization of this idea is now under way and is expected to settle for all time the fuel problems of the central allies.

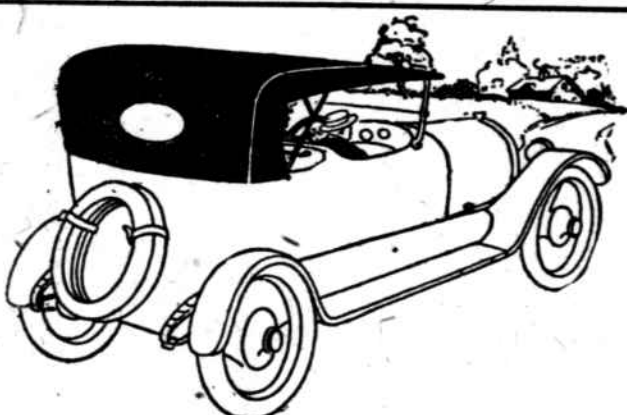
GEORGE BROWN.

Pass It Along.

There was a young lady of Detroit,
Who at driving her car was adroit,
But her speed was too great,
And her turn came too late,
And so the young lady was hoit.

—Tiger.

There was a young lady of New York,
Whose driving was all of the talk,
But her speed was too great
To spy cops 'twas too late,
And now to the court she must walk.



A NEW TOP ADDS REAL VALUE TO YOUR CAR.

Let us re-cover your car with Neverleek, Pantastote, or any of the other fine materials which we use. Then you'll have a top that won't crack or break in any climate or weather—that fits trim, snug and tight—that doesn't sag or bag or stretch—that lasts as long as the car itself. Come in and see us.

BOSTON AUTO TOP COMPANY,

1006 PENNSYLVANIA AVE.

MAIN 6930

DENBY MOTOR TRUCKS

Pioneers of the Internal-Gear Drive

And Did You Know---



Capacities:
1 Ton to 5 Tons.

That the Denby internal-gear axle can never be damaged through failure to lubricate it at a given time. Denby internal-gears, on tests, have run for months without any lubrication at all.

And the Denby axle is so simple that the average garage mechanic can overhaul it with perfect satisfaction.

These are important points to consider; for no matter how carefully a truck is handled in service, it is human nature to overlook something once in a while.

HENDERSON MOTOR CAR CO.,

F. S. CARMODY, President.

932 Fourteenth St.

Frank. 5611



This picture was taken immediately after three of a partial shipment of Mitchell cars arrived at the salesrooms of the Barry Motor Company. They're 1918 models, too!

Old Dobbin Takes Back Seat For Auto and Motor Truck

That Old Dobbin is being rapidly supplanted both for pleasure driving and for work at hauling and farming is shown by a recently issued compilation of the American Automobile Chamber of Commerce which shows that 2,000,000 horses have been supplanted by motor trucks. The following figures are given:

Motor vehicles registered in United States.....	4,342,129
Motor trucks in use in United States.....	435,000
Tons of goods hauled yearly by trucks (estimated).....	1,200,000,000
Cost of haulage by motor trucks at 15 cents a ton mile.....	\$1,440,000,000
Value of passenger service at 2 cents a mile.....	\$1,152,000,000
Value of automobiles in United States to one motor car.....	40
Percentage of cars sold to farmers in 1917 (estimated).....	1.77
Number of automobiles to each mile of public roads.....	1.77
Number of automobiles to each square mile.....	1.77
Automobiles in use in all other countries January 1, 1917.....	719,246
Automobiles in use in Europe January 1, 1917.....	437,558
Automobiles in use in Canada January 1, 1917.....	118,086
Automobiles in use in South America January 1, 1917.....	39,188
Horses in the United States.....	24,000,000
Horses displaced by motor trucks in use (estimated).....	120,000,000
Acres of land released by trucks for production of human foods.....	2,000,000
Horses and mules exported in last three years.....	10,000,000
	1,325,959

F. S. CARMODY TELLS OF WAR TIME AUTOS

Saxon Distributor Gets Chance to
Talk, as Result of Snow.

It is not often that one can listen to Francis S. Carmody for any length of time.

"Too busy selling Saxons," is his usual reply to repeated efforts in that direction.

The snow brought a lull in the sale of Saxons long enough for these few remarks concerning whether the American people could get along without the automobile:

"Undoubtedly they could, but no easier than they could get along without the typewriter, telephone, telephone, street car and elevator. It is necessary in order to maintain present standards of human efficiency. It is one of the things that has made us great in achievement, because it has kept us in closer touch with others.

Noisy Gears.

When it is desired to overcome the noise of a set of badly worn gears it must be understood that the replacement of one of the gears will not do the trick. Only by replacing both members can it be hoped to quiet the noise.

Glass- Enclosed ANCHOR AUTO TOPS

THE Hooverized Comfort---

The Maximum of
Auto Convenience at
Minimum Cost

Make winter driving a distinct pleasure by securing one of these few remaining Anchor Glass-Enclosed Tops for your car. Fits Overland, Buick, Oakland and Ford.

Federal Auto Supply Co.

J. WELLS, Manager,

477 Pennsylvania Avenue

Washington to Indian Head

On and after February 5th Semmes Motor Line will extend their Southern Maryland Passenger Service into INDIAN HEAD.

Comfortable heated pneumatic tire busses.

LEAVE WASHINGTON 8:00 A. M.

LEAVE INDIAN HEAD 6:00 P. M.

Daily and Sunday.

For further information call at office, 613 G St. N. W., or phone Franklin 2713. Mr. Chadwick.

WOMEN FIND PLACES IN AUTO-INDUSTRY

Have Replaced Skilled Workers
Taken by Uncle Sam.

"When the echo from the guns of war reached this country bringing the call for men and more men we decided to let women help fill the places of those patriots in our plant who answered the call," said the local Mitchell dealer, Mr. Neumeier, while discussing the war, women and the motor.

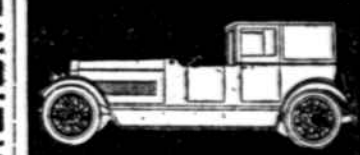
"Of course they could not manage the huge machinery, but we found they made excellent inspectors of small parts of the machinery that went into our cars. So under the guidance of a corps of men, who were experts on every part of the Mitchell engine, we tried out their services in this capacity.

"The women took such an interest in the work and performed their task so thoroughly and carefully we searched for more. Many of the applicants who applied for places at our factory were sisters of the ladies who joined the colors. Naturally we gave them preference. If the soldier boys who left our plant are as enthusiastic about their work as the young women who took their places, the war will likely come to a short close.

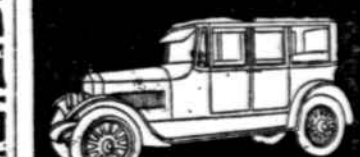
Since women have entered the Mitchell shops there has been less trouble replacing small parts and I believe the efficiency has been increased greatly. Our plant has noticed a decided change in the amount of work turned out and in the high caliber performed by our women workers. The old idea that women would not be prompt nor steady in their labor, was eliminated the first month they were on their pay roll.

"The women of England and France took up the work of men in the middle part of the war, but these young women answered the call early in the season. As a rule women are more thorough in detail work, which has also been demonstrated by these women inspectors. Every little screw, bolt, gear, rod or pin must be tested for hardness, strength and wear, as the Mitchell cars are built entirely out of raw materials in the home shops."

MURRAY THE BIGGEST HIT OF THE NEW YORK, PHILADELPHIA AND BALTIMORE Auto Show



Town Car
\$5,500



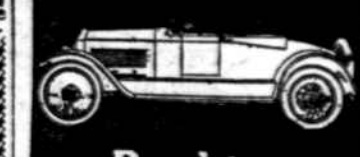
Sedan
\$4,000



7-Pass. Touring
\$2,800



4-Pass. Touring
\$2,800



Roadster
\$2,800

Wandeyne Co.

Salesrooms and Service Sts.,

1226 Connecticut Ave.,

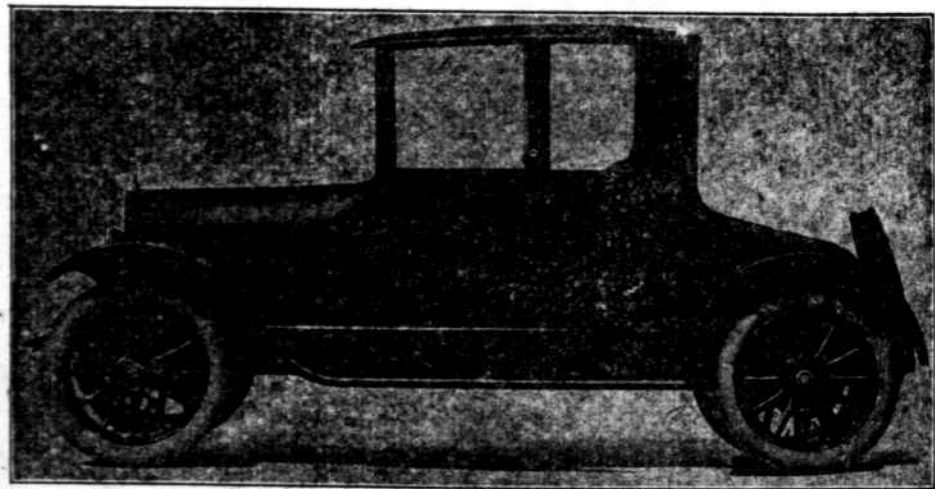
Washington, D. C.

Salesrooms and Service Sts.,

1201 N. Charles St.,

Baltimore, Md.

OLYMPIAN



"The \$1,340 Closed Car in the \$2,000 Class"

A Crowning Achievement in Motor Cars.
Winter Comfort and Graceful Lines
Combined with Economy and Durability

A Demonstration is All
We Ask

Immediate Deliveries on
All Cars

5 Passenger Sedans.....\$1,565
5 Passenger Touring..... 965
5 Passenger Roadster..... 965

WM. D. BROWN MOTOR COMPANY

1212 CONNECTICUT AVE. N. W.

WASHINGTON, D. C.

Phone Franklin 4585.

Open Evenings.